



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/801,400	03/07/2001	Harald Bock	112740-191	4054

29177 7590 02/23/2006

BELL, BOYD & LLOYD, LLC
P. O. BOX 1135
CHICAGO, IL 60690-1135

EXAMINER

SEDIGHIAN, REZA

ART UNIT PAPER NUMBER

2633

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/801,400

Applicant(s)

HARALD BOCK ET AL.

Examiner

M. R. Sedighian

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 2633

1. This communication is responsive to applicant's 9/6/05 amendments and remarks in the application of Bock Haraled filed 3/7/01. The amendments have been entered. Claims 1-3 and 5-7 are now pending.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "the first filter device" in line 4. There is insufficient antecedent basis for this limitation in the claim.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Srivastava et al. (US Patent No: 6,025,941).

Regarding claim 1, Srivastava teaches a system for suppressing oscillating instabilities in an optical wavelength division multiplex ring network (col. 1, lines 45-65 and fig. 1), comprising: a wavelength demultiplexer filter device (101, 181, fig. 1) inserted in an optical fiber (105, 104, fig. 1) of the ring network (fig. 1) for demultiplexing a wavelength division multiplex

Art Unit: 2633

signal into individual optical signals (col. 6, lines 32-40 and 101, 107, fig. 1 and 107, 601, fig. 6), wherein the wavelength demultiplexer filter device (101, 181, fig. 1) has a low stop-band attenuation only for individual optical signals which are in transmission channels (note that filter 181 has a low stop-band attenuation for individual optical signals which are in transmission channels to further transmit such signals to WGR 107) and further having a high stop-band attenuation for emission emanating outside the transmission channels having a wavelength range that contains instabilities (col. 7, lines 7-17), and a multiplexer filter device (107, fig. 1 and 107, 604, fig. 6) for combining the individual signals into a wavelength division multiplex signal (col. 6, lines 50-52).

Regarding claim 2, Srivastava teaches both the demultiplexer filter device and the multiplexer filter device are incorporated into a single module (col. 6, lines 32-35 and 107, figs. 1, 6) and the output of the demultiplexer filter device being connected to an input of the second multiplexer filter device (the output of demultiplexer 601 is connected to an input of multiplexer 604, as it is shown in fig. 6).

Regarding claim 5, Srivastava teaches the system is provided in a network node (101, fig. 1) of a ring network (the ring network that is comprised of the nodes 101, 102, and 103, fig. 1).

Regarding claim 6, Srivastava teaches the system is provided in a network node (101, fig. 1) of a ring network (the ring network shown in fig. 1) and is designed as an add-drop device (col. 2, lines 37-40).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2633

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US Patent No: 6,181,849) in view of Srivastava et al. (US Patent No: 6,025,941).

Regarding claim 1, Lin teaches a system for suppressing oscillating instabilities in an optical wavelength division multiplex ring network (col. 1, lines 1-14, 53-64 and fig. 1), comprising: a wavelength demultiplexer filter device inserted in an optical fiber of the ring network (col. 1, lines 55-64 and fig. 1) for demultiplexing a wavelength division multiplex signal into individual optical signals (col. 1, lines 38-41), wherein the filter device has a low stop-band attenuation only for individual optical signals which are in transmission channels, and further having a high stop-band attenuation outside the transmission channels (col. 1, lines 40-45), and a multiplexer filter device for combining the individual signals into a wavelength division multiplex signal (col. 1, lines 44-46). Lin differs from the claimed invention in that Lin does not specifically disclose the filter device has a high stop-band attenuation for emission emanating outside the transmission channels having a wavelength range that contains instabilities.

However, It is well known in optical transmission systems optical components such as optical amplifiers causes instabilities. Specification of present application in the description of the prior art section, discloses optical amplifiers lead to instabilities, and such instabilities can be avoided by the use filters (Spec, Page 1, lines 15-20). Srivastava discloses a WDM optical add/drop ring network (fig. 1) with transmission channels having wavelength ranges that contains instabilities (col. 7, lines 15-17), wherein a filter device (181, fig. 1) can be used as a protection means (col. 7, lines 10-15) to block ASE between channels (col. 7, lines 15-17). As Lin discloses a

Art Unit: 2633

particular passband permits passage of one or more particular wavelengths along a respective optical path, and substantial exclusion of others (col. 1, lines 40-45), therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention that the WDM transmission system of Lin can reject or suppress unwanted signals such as oscillating instabilities, or can reject and suppress emissions emanating outside transmission channels having instabilities, as disclosed by Srivastava, to improve signal light transmission and to allow light of certain wavelength range to reach destination.

Regarding claim 2, Lin teaches the passage of one or more particular wavelengths (col. 1, lines 41-43, a first filter device) and to combine various wavelengths into one multichannel optical signal on one optical path (col. 1, lines 45-48, a second filter device). Specification of the present application describes (Spec, Page 2, lines 16-17) the first filter device is a wavelength division demultiplexer, and the second filter device is a wavelength division multiplexer. Likewise, Lin teaches (col. 1, lines 43-49) a wavelength division demultiplexer (a first filter device) and a wavelength division multiplexer (a second filter device).

Regarding claim 5, Lin teaches the system can be provided in a network node of a ring network (col. 1, lines 53-64).

Regarding claim 6, Lin teaches the system can be provided in a network node of the ring network and is designed as an add-drop device (col. 1, lines 52, 62-64).

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US Patent No: 6,181,849) in view of Srivastava et al. (US Patent No: 6,025,941) and in further view of Strasser et al. (US Patent No: 5,850,302), or Henmi (US Patent No: 6,137,603).

Art Unit: 2633

Regarding claim 3, the modified optical transmission system of Lin and Srivastava differs from the claimed invention in that Lin and Srivastava do not disclose a Bulk filter, or an AWG filter. Strasser teaches a Bulk filter (col. 6, lines 52-55). Henmi teaches an AWG add-drop filter (col. 1, lines 26-31). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate an optical Bulk filter such as the one of Strasser, or an AWG filter such as the one of Henmi, for the particular passband or optical filtering in the add/drop WDM transmission system of Lin modified by Srivastava in order to provide a filter that is easily customized and that is readily adaptable to a wide range of applications and that can reduce crosstalk between adjacent channels.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava et al. (US Patent No: 6,025,941) in view of Strasser et al. (US Patent No: 5,850,302), or Henmi (US Patent No: 6,137,603).

Regarding claim 3, Srivastava differs from the claimed invention in that Srivastava does not disclose a Bulk filter, or an AWG filter. Strasser teaches a Bulk filter (col. 6, lines 52-55). Henmi teaches an AWG add-drop filter (col. 1, lines 26-31). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate an optical Bulk filter such as the one of Strasser, or an AWG filter such as the one of Henmi, for the filter in the WAD node of Srivastava in order to provide a filter that is easily customized and that is readily adaptable to a wide range of applications and that can reduce crosstalk between adjacent channels.

Art Unit: 2633

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lin et al. (US Patent No: 6,181,849) in view of Srivastava et al. (US Patent No: 6,025,941) and in further view of Sugaya et al. (US Patent No: 6,292,289).

Regarding claim 7, the modified optical transmission system of Lin and Srivastava differs from the claimed invention in that Lin and Srivastava do not disclose a wavelength range of 1.53 μ m to 1.565 μ m. Sugaya teaches an optical WDM transmission system (2, 8, fig. 2), wherein optical signal ranges of 1.53 μ m to 1.565 μ m can be transmitted (col. 2, lines 44-55). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate an optical transmission system that generate optical signals in the range of 1.53 μ m to 1.565 μ m such as the one of Sugaya for the signal light transmission system of Lin modified by Srivastava in order to transmit, add, drop, and multiplex a plurality of channels of different wavelengths.

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava et al. (US Patent No: 6,025,941) in view of Sugaya et al. (US Patent No: 6,292,289).

Regarding claim 7, Srivastava differs from the claimed invention in that Srivastava does not disclose a wavelength range of 1.53 μ m to 1.565 μ m. Sugaya teaches an optical WDM transmission system (2, 8, fig. 2), wherein optical signal ranges of 1.53 μ m to 1.565 μ m can be transmitted (col. 2, lines 44-55). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate an optical transmission system that generate optical signals in the range of 1.53 μ m to 1.565 μ m such as the one of Sugaya for the signal light

Art Unit: 2633


transmission system of Srivastava in order to transmit, add, drop, and multiplex a plurality of channels of different wavelengths.

12. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


M. R. SEDIGHIAN
PRIMARY EXAMINER